

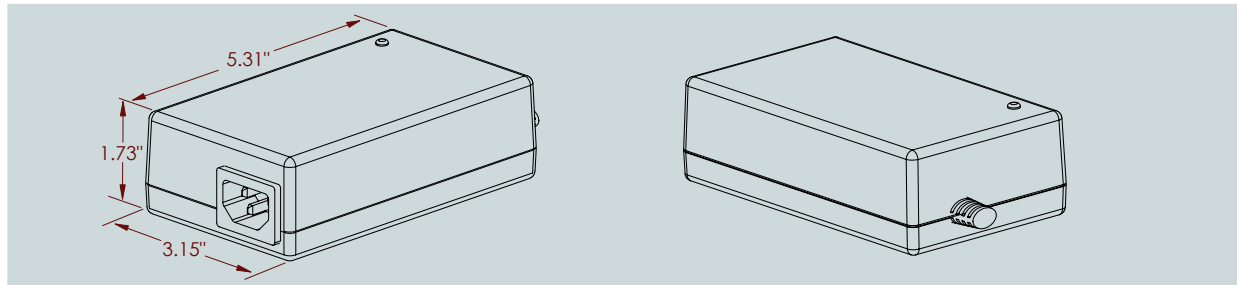
Switch mode lead acid chargers are designed to effectively charge sealed lead acid batteries while protecting the batteries from over-charging. All charger ratings are based on a nominal input of 90-264 / 47-63Hz. The output current ranges from 2A to 4A.



LEAD ACID CHARGER, 4A

Features:

- 3 step charge control with timer
- Switch mode charger with universal input voltage
- Available in 12V and 24V versions
- LED status indicator
- Protected against reverse polarity and short circuit
- Medical approved (EN60601)
- Custom specifications on request



Category	Specification	
Model number	452040-SB	452040-SC
Input rating	Nominal 90-264VAC/47-63Hz	
Nominal voltage rating	12V	24V
Maximum output power	60W	
Load regulation	<200mV	
Line regulation	<100mV	
Switch frequency	≈40 kHz	
Leakage current from battery	<100uA	<200uA
Temperature range	-10°C to +40°C	
Ripple	<100 mV p-p	
Efficiency (at 100% load)	80%	
Current limit	4A +/- 0.3	2A +/- 0.2
Insulation class	Class I	
Electrical safety	UL 60601-1, EN 60601-1, EN 60950, EN 60335-2-29	
EMC standards	EN 60601-1-2 (Medical), EN 61000-6-3 (Emission), EN 61000-6-1 (Immunity)	
Timer	2hr +/-30% (also available with other values)	
Input connection	3 pin IEC 320 (input cordset not included)	
Output connection	Battery clips*	
Dimensions / weight	5.31" x 3.15" x 1.73" (135 x 80 x 44mm)/ .77 lbs. (350g)	
Recommended battery capacity	15 - 90Ah	7 - 45Ah

*other output connection options available upon request



Functionality:

Once the charger is attached to a sealed lead acid battery and plugged in, the charging process will begin. The charger will subject the lead acid battery to three steps of charging.

In the first step, the charger will enter into 'boost' mode. During this step, the charger is in constant current mode with the current rate remaining at its maximum value (note- the battery voltage is lower than the switching level of the timer).

In step two, the battery will be nominally 80-95% charged, and the charger will switch into time controlled/ constant voltage mode (current is no longer being provided at its maximum rate). The charger will continue to provide a constant voltage until the time interval is completed.

The third and final step will place the charger in float/standby mode as the battery will be fully charged. Because the charge voltage is at a standby level, the charger can continue to be connected to the battery. Should the battery be used, the charger can return to rapid charging (step 1).

Charge control values:

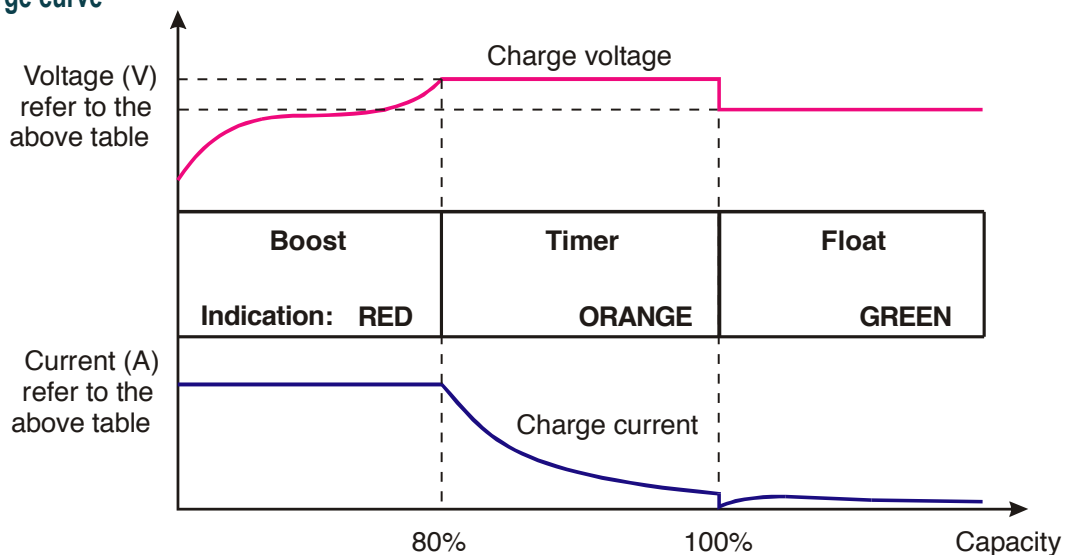
Model number	452040-SB	452040-SC
Charger voltage rating	12V	24V
Step 1: Boost/ constant current	4A	2A
Step 2: Timer*/ constant voltage	2 hr. +/- 30 min. / 14.7V +/- 0.2V	2hr. +/- 30 min. / 29.5V +/- 0.2V
Step 3: Float/ constant voltage	13.8 +/- 0.3V	27.6V +/- 0.3V

*Timer is available with other values

LED status indicator:

The lead acid charger has an LED status indicator to inform the user of its status. During step 1, the LED appears red. In step 2, the LED appears orange. During the third step, the LED appears green.

Charge curve



*When specifying product, please consult with Cell-Con to verify that the specifications identified on this data sheet are current.

